BLM

U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

DOI-BLM-UT-G010-2014–0261–EA
Ultra's proposed Three Rivers Fed 4–34T–820 and Three Rivers Fed 4–44T–820

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

DOI-BLM-UT-G010-2014–0261–EA

Ultra's proposed Three Rivers Fed 4–34T–820 and Three Rivers Fed 4–44T–820

Prepared by
U.S. Department of the Interior
Bureau of Land Management

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Finding of No Significant Impact

Finding of No Significant Impact:

Based on the analysis of potential environmental impacts DOI-BLM-UT-G010-2014–0261–EA, I have determined that the proposed action will not have any significant impacts on the environment, and an environmental impact statement is not required.

Signature:

Approved by:

	/s/ Jerry Kenczka	10/03/2014
	Authorized Officer AFM for Minerals	[Date]

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Decision Record - Memorandum

Selected Action:

It is my decision to authorize Ultra Resources Inc. proposed split estate wells as described in the proposed action of DOI-BLM-UT-G010-2014-0261-EA

This decision includes the following components:

Table 1. Maximum Proposed Site Disturbance

Well Name	*Well Pad / Reserve Pit*	*Access Road*	*Buried Pipeline*	*Overhead Power line*	*Total*
Three Rivers Fed 4-34T-820, 4-44T-820 and Three Rivers 4–43–820	3.4 acres	18 feet 0.1 acre	20 feet 0.1 acre	26 feet 0.1 acre	3.7 acres

Conditions of Approval:

This decision is contingent on meeting all stipulations and monitoring requirements listed below, which were designed to minimize and/or avoid impacts.

- Stationary internal combustion engines would comply with the following emission standards: 2 g/bhp-hr of NOx for engines less than 300 HP and 1 g/bhp-hr of NOx for engines over 300 HP.
- Either no or low bleed controllers would be installed on pneumatic pumps, actuators or other pneumatic devices.
- VOC venting controls or flaring would be utilized for oil or gas atmospheric storage tanks.
- VOC venting controls or flaring would be used for glycol dehydration and amine units.
- Where feasible, green completion would be used for well completion, re-completion, venting, or planned blowdown emissions. Alternatively, use controlled VOC emissions methods with 90% efficiency.
- The best method to avoid entrainment is to pump from an off-channel location – one that does not connect to the river during high spring flows. An infiltration gallery constructed in a BLM and Service approved location is best.
- If the pump head is located in the river channel where larval fish are known to occur, the following measures apply:
    - do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate larval fishes;

- limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to August 31); and
- limit the amount of pumping, to the greatest extent possible, during the pre-dawn hours as larval drift studies indicate that this is a period of greatest daily activity.

- Screen all pump intakes with 3/32 inch mesh material.
- Approach velocities for intake structures will follow the National Marine Fisheries Service's document "Fish Screening Criteria for Anadromous Salmonids". For projects with an in-stream intake that operate in stream reaches where larval fish may be present, the approach velocity will not exceed 0.33 feet per second (ft/s).
- Report any fish impinged on the intake screen to the Service (801.975.3330) and the Utah Division of Wildlife Resources:

Northeastern Region318 North Vernal Ave, Vernal, UT 84078

Phone: (435) 781-9453

Rationale:

The proposed wells and related facilities meet the BLM's purpose and need to allow the lessee to develop the subject mineral lease indicated above in an environmentally sound manner. The need for the action is established by BLM Onshore Orders (43 CFR 3160) which require BLM approval of APDs on split estate.

An on-site review of the APD(s) was held on June 4, 2014 and the surface owner was invited to attend. The operator has provided certification that they have a surface owner's agreement, which was received by the BLM on August 22, 2014. No major issues were identified by the surface owner.

The above factors and the analysis contained in DOI-BLM-UT-G010-2014-0261-EA for Ultra Resources Inc.'s proposed wells were carefully considered and evaluated. In addition, the APD and surface owner's agreements were reviewed. All reports were read and the information contained weighed in determining the appropriateness of the decision stated above.

Land Use Plan Conformance:

The selected alternative is in conformance with the Vernal Field Office Resource Management Plan and Record of Decision (BLM 2008).

The selected alternative is consistent with *Uintah County General Plan* (published in 2007) that encompasses the location of the proposed wells. In general, the plan indicates support for development proposals such as the selected alternative through the plan's emphasis of multiple-use public land management practices, responsible use and optimum utilization.

There are no comprehensive State of Utah plans for the vicinity of the selected alternative. However, the State of Utah School and Institutional Trust Lands Administration (SITLA) have leased much of the nearby state land for oil and gas production. Because the objectives of SITLA are to produce funding for the state school system, and because production on federal leases could

further interest in drilling on state leases in the area, it is assumed that the selected alternative is consistent with the objectives of the State.

Public Involvement:

The proposed project was posted on the Eplanning NEPA Register on 9/9/2014. No comment has been received.

Alternatives Considered:

The EA analyzed the proposed action and no action alternatives. Onsite visits were conducted by Vernal Field Office Personnel. The onsite inspection reports do not indicate that any other locations be proposed for analysis. The no action alternative was not selected because it would not best meet the BLM's need to acknowledge and allow development of valid existing leases.

Appeal or Protest Opportunities:

This decision is effective upon the date it is signed by the authorized officer. The decision is subject to appeal. Under BLM regulation, this decision is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this decision must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, Utah State Office, P.O. Box 45155, Salt Lake City, Utah, 84145-0155, within 20 business days of the date this Decision is received or considered to have been received.

If you wish to file a petition for stay, the petition for stay should accompany your notice of appeal and shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied;

2. The likelihood of the appellant's success on the merits;

3. The likelihood of irreparable harm to the appellant or resources if the stay is not granted; and,

4. Whether the public interest favors granting the stay.

Signature:

Authorizing Official:

/s/ Jerry Kenczka	10/03/2014
Authorized Officer AFM for Minerals	[Date]

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Chapter 1. Introduction

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1.1. Identifying Information:

This Environmental Assessment (EA) has been prepared by the Bureau of Land Management Vernal Field Office to analyze Ultra Resources Inc. (Ultra) Applications for Permit to Drill (APDs), including roads, pipelines, well pad, and the associated infrastructure. The subject wells are on split estate lands. The well pad, access road, power corridor, and pipeline route are on Three Rivers Holdings, LLC lands with mineral estate being held by the Bureau of Land Management. The well information is as follows:

Table 1.1. Well Information

Well Identification	Legal Location	Lease Number	Land Owner	Mineral Owner
Three Rivers Federal 4-34T-820	Sec 4, T8S, R20E	UTU-85994	Three Rivers Holdings, LLC	BLM
Three Rivers Federal 4-44T-820	Sec 4, T8S, R20E	UTU-85994	Three Rivers Holdings, LLC	BLM
Three Rivers 4–43–820	Sec 4, T8S, R20E	UTU-85994	Three Rivers Holdings, LLC	Private (FEE)

The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions.

1.1.1. Title, EA number, and type of project:

Title: Ultra Proposed Three Rives Fed 4–34T–820 and Three Rivers 4–44T–820

NEPA #: DOI-BLM-UT-G010-2014–0261–EA

Project Type: Environmental Assessment

1.1.2. Location of Proposed Action:

The proposed project area is located in section 4, T. 8 S., R. 20 E., Uintah County, Utah. The proposed project area is located approximately 29 miles south west of Vernal, Utah.

1.1.3. Name and Location of Preparing Office:

Vernal Field Office

170 South 500 East

Vernal, Ut. 84078

(435) 781–4400

1.1.4. Identify the subject function code, lease, serial, or case file number:

Lease Number: UTU-85994

1.1.5. Applicant Name:

Ultra Resources, Inc.

1.2. Purpose and Need for Action:

The BLM decision to be made is whether or not to approve the APDs. The purpose of the action is to allow the lessee to develop the federal mineral lease indicated above in an environmentally sound manner. The need for the action is established by BLM Onshore Orders (43 CFR 3160), which require the BLM to review and approve APDs on federal leases, including those leases with split estate lands. However, the BLM has no jurisdiction over surface impacts on these split estate lands.

1.3. Scoping, Public Involvement and Issues:

On-site reviews of the APDs were conducted on 6/4/2014; the surface owners were invited to attend. The operator has provided certification that they have a surface owner's agreement, which was received by the BLM on 8/22/2014. No issues were identified by the surface owners. A cultural resource survey has been completed and cover page of the survey results was submitted with the APD package, no resources were identified.

The proposed project was posted on the Eplanning NEPA Register on 9/9/2014.

Chapter 2. Proposed Action and Alternatives

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2.1. Description of the Proposed Action:

Ultra proposes to drill the following oil wells: Listed in the following table which summarizes the maximum proposed site disturbance listed in acres.

Table 2.1. Surface Disturbance Summary

Well Name	Well Pad / Reserve Pit	Access Road	Buried Pipeline	Overhead Power line	Total
Three Rivers Fed 4-34T-820, 4-44T-820 And Three Rivers 4–43–820	3.4 acres	18 feet 0.1 acre	20 feet 0.1 acre	26 feet 0.1 acre	3.7 acres
TOTAL	**4.0**	**0.1**	**0.1**	**0.1**	**3.7 acres**

2.1.1. Surface Disturbance

New surface disturbance from the construction of the well pads and reserve pits would be approximately 3.4 acres. However the well pad has already built in order to drill the Three Rivers 4–43–820 well. The , totals will be lessened when interim reclamation becomes successful. Surface and subsoil materials in the immediate project area would be used for construction. Topsoil will be saved for reclamation purposes only. The reserve pit would be fenced on three sides during drilling operations and on the fourth side when the rig moves off location. It would be fenced, and the fence maintained, until the pit is reclaimed within 180 days of the well going into production.

There would be approximately 0.1 acre of new surface disturbance for access road, pipeline, and power-line infrastructure. However, disturbance will be lessened for long term when reclamation work is completed.

Up to 3 acre-feet per year of fresh water for drilling and completion operations would be obtained from the following source: Permit # 43-10988 Target Trucking.

All production facilities would be located on the disturbed portion of the well pad and a minimum of 25 feet from the toe of the back slope, preferably on cut, and towards the front of the well pad to maximize interim reclamation. A dike/berm (earthen or corrugated steel) large enough to hold 110% of the capacity of the largest tank would be constructed completely around those production facilities which contain fluids.

Upon well completion, the operator would reclaim the reserve pit in accordance with Onshore Orders, regulations, and the surface owner requirements. Also, any unused portion of the well pad not needed for continued operations will undergo interim reclamation practices. This must be addressed in the reclamation plan required under Onshore Order #1 section J of the Surface Use Plan. Upon well abandonment, the operator would reclaim the well pad, road, and pipeline as directed by the surface owner or by the BLM AO.

2.2. No Action Alternative

The well pad has been built to drill the Three Rivers 4–43–820. The lease allows drilling to occur in the lease areas subject to the stipulations of the specific lease agreement. BLM can deny the APD, if the proposal would violate lease stipulations, applicable laws, and regulations, and also can impose restrictions to prevent undue or unnecessary environmental degradation. If BLM were to deny the APD, the applicant could attempt to reverse the BLM's decision through administrative appeals. The outcome of that action is beyond the scope of this EA and cannot be projected or meaningfully analyzed at this time.

2.3. Alternatives Considered but not Analyzed in Detail

There were no other alternatives identified aside from the Proposed Action and No Action Alternatives that would meet the purpose and need of this project.

2.4. Conformance

The alternatives are in conformance with the Vernal Field Office RMP/ROD (October 31, 2008) and the terms of the lease. The RMP/ROD decision allows leasing of oil and gas while protecting or mitigating other resource values (RMP/ROD p. 97-99). The Minerals and Energy Resources Management Objectives encourage the drilling of oil and gas wells by private industry (RMP/ROD, p. 97). The RMP/ROD decision also allows for processing applications, permits, operating plans, mineral exchanges, and leases on public lands in accordance with policy and guidance and allows for management of public lands to support goals and objectives of other resources programs, respond to public requests for land use authorizations, and acquire administrative and public access where necessary (RMP/ROD p. 86). It has been determined that the proposed action and alternative(s) would not conflict with other decisions throughout the plan. .

2.5. Relationships to Statutes, Regulations, or Other Plans

2.5.1. Federal Laws and Statutes

The subject lands were leased for oil or gas development under authority of the Mineral Leasing Act of 1920, as modified by the Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The lessee/operator has the right to explore for oil and gas on the lease as specified in 43 CFR 3103.1-2, and if a discovery is made, to produce oil and/or natural gas for economic gain.

2.5.2. State and Local Laws and Statutes

There are no comprehensive State of Utah plans for the vicinity of the Proposed Action.

The proposed project is consistent with the *Uintah County General Plan,* 2011 (Plan) that encompasses the location of the proposed well. In general, the Plan indicates support for development proposals such as the Proposed Action through the Plan's emphasis on multiple-use public land management practices, responsible use and optimum utilization.

The State of Utah School and Institutional Trust Lands Administration (SITLA) have leased much of the nearby state land for oil and gas production. Because the objectives of SITLA are to produce funding for the state school system, and because production on federal leases could further interest in drilling on state leases in the area, it is assumed that the alternatives analyzed, except the No Action Alternative, are consistent with the objectives of the state.

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Chapter 3. Affected Environment:

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3.1. Air Quality

Air Quality: The National Ambient Air Quality Standards (NAAQS) are standards that have been set to protect human health and welfare with an adequate margin of safety. Pollutants for which standards have been set include ground level ozone (O3), SO2, nitrogen dioxide (NO2), CO, PM10, and PM2.5. The Project Area is located in the Uinta Basin, which is designated as unclassified/in attainment of the NAAQS by the Environmental Protection Agency (EPA) under the Clean Air Act. The Greater Natural Buttes FEIS, Tables 3.1-2 and 3.1-3 list ambient air quality background values for the Uinta Basin and the NAAQS standards.

Two year-round air quality-monitoring sites were established in summer 2009 near Red Wash (southeast of Vernal, Utah) and Ouray (southwest of Vernal). The complete EPA monitoring data can be found at http://www.epa.gov/airexplorer/index.htm. Both monitoring sites have recorded numerous exceedences of the 8-hour ozone standard during the winter months (January through March 2010 and 2011). The exceedences did not occur in 2012 due to lack of snow cover. Winter ozone formation is a newly recognized issue, so the ozone precursor sources are still being identified and the methods of analyzing and managing this problem are still being developed.

During the 2006-2007 winter season in Vernal, Utah, the UDAQ recorded PM2.5 levels higher than the PM2.5 health standards that became effective in December 2006, likely due to combustion and dust, similar to other areas in northern Utah that experience wintertime inversions, plus nitrates and organics from oil and gas activities in the Basin. PM2.5 monitoring that has been conducted in the vicinity of oil and gas operations in the Uinta Basin by the Red Wash and Ouray monitors beginning in summer 2009 have not recorded any exceedences of either the 24 hour or annual NAAQS.

Hazardous Air Pollutants (HAPs) are pollutants that are known or suspected to cause cancer or other serious health effects or adverse environmental impacts. The EPA has classified 187 air pollutants as HAPs. There are no applicable Federal or State of Utah ambient air quality standards for assessing potential HAP impacts to human health. Refer to Section 3.1 (pages 3-2 through 3-13) in the Greater Natural Buttes Final EIS for additional information on air quality conditions relevant to the Project Area.

Greenhouse Gases: Greenhouse gases keep the planet's surface warmer than it otherwise would be but as concentrations of these gases increase, the Earth's temperature is climbing above past levels. The analysis of the Regional Climate Impacts prepared by the U.S. Global Change Research Program (USGCRP) (2009) suggests that recent warming in the region including the project area was nationally among the most rapid. Past records and future projections predict warmer nights and effectively higher average daily minimum temperatures. For eastern Utah, the USGCRP projects an approximate 5 percent to 40 percent annual precipitation decrease. Refer to Section 3.1.3.7 (pages 3-12 through 3-13) in the Greater Natural Buttes Final EIS for more information on climate change.

3.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

The proposed wells are located in Section 4 of T8S R20E. The area is relatively flat with a strong sage type community and 5-8 inches of precipitation per year on average. The soils are mixture sandy loams. The native vegetation in the area has been removed do to agricultural practices in the area.

3.3. Wildlife: Migratory Birds (Including raptors)

All migratory birds and their nests are protected from take or disturbance under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C., 703 et seq.). These protection laws were implemented for the protection of avian species. Unless permitted by regulations, it is unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any species covered under these Acts. In addition, Executive Order 13186 sets forth the responsibilities of federal agencies to further implement the provisions of these Acts by integrating bird conservation principles and practices into agency activities and by ensuring that federal actions evaluate the effects of actions and agency plans on protected avian species.

The following addresses migratory birds that may utilize the project area for nesting or foraging activities, including those species classified as Priority Species by Utah Partners-in-Flight. Utah Partners-in-Flight is a cooperative partnership among federal, state, and local government agencies as well as public organizations and individuals organized to emphasize the conservation of birds not covered by existing conservation initiatives.

Desert/Shrub Areas: American robin, American white pelican, bald eagle, blue-gray gnatcatcher, black-billed magpie, black-capped chickadee, black-chinned hummingbird, black-throated sparrow, bobolink, Brewer's blackbird, Brewer's sparrow, broad-tailed hummingbird, common raven, mountain bluebird, sage sparrow, sage thrasher, short-eared owl, song sparrow, western burrowing owl, and western kingbird.

3.4. Wildlife:Threatened, Endangered, Proposed or Candidate

The USFWS has identified four federally listed fish species historically associated with the Upper Colorado River Basin as being impacted through water depletions: bonytail, Colorado pikeminnow, humpback chub, and razorback sucker. These fish are federally and state-listed as endangered and have experienced severe population declines due to flow alterations, habitat loss or alteration, and the introduction of non-native fish species.

Chapter 4. Environmental Effects:

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4.1. Direct and Indirect Impacts

The potential direct, indirect, and cumulative impacts from Alternative A (the Proposed Action) and Alternative B (the No Action Alternative) are discussed in the following sections of Chapter 4. Direct impacts to soils and vegetation in the following analyses are described as short-term and long-term impacts. In areas where interim reclamation is implemented, ground cover by herbaceous and woody species could be re-established to approximately 75 percent of initial basal cover within five years following seeding of native plant species and diligent weed control efforts. These reclaimed areas are categorized as short-term disturbance.

4.2. Proposed Action

4.2.1. Air Quality

Air Quality: Emissions during well development include: NOX, SO2, and CO tailpipe emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities; small amounts of HAPs emissions from construction equipment; fugitive dust from vehicle traffic on unpaved roads and wind erosion where soils are disturbed; and NOX, CO, and lesser amounts of SO2 from drill rig and fracturing engine operations. These emissions would be short-term during the drilling and completion phases.

Emissions during well production include: continuous NOX, CO, VOC, and HAP emissions from well pad separators, condensate storage tank vents; and daily tailpipe and fugitive dust emissions from operations traffic. Emissions would be dispersed and/ or diluted to the extent where any local ozone impacts from the Proposed Action would be indistinguishable from background conditions.

Annual estimated emissions from the Proposed Action are summarized Table 4.1, “Proposed Action Annual Emissions (tons/year) ” (p. 15).

Table 4.1. Proposed Action Annual Emissions (tons/year)

Pollutant	Development[1]	Production	Total
NO_x	12.93	7.98	20.91
CO	4.11	13.44	17.55
VOC	0.51	30.24	30.75
SO^x	0.12	0.03	0.15
PM_{10}	0.42	0.57	0.99
$PM_{2.5}$	0.42	0.57	0.99
Benzene	0	0.69	0.69
Toluene	0	0.12	0.12
Ethylbenzene	0	0.03	0.03
Xylene	0	0.06	0.06
n-Hexane	0	0.33	0.33
Formaldehyde	0	0.45	0.45

[1] Emissions include 3producing well(s) and associated operations traffic during the year in which the project is developed.

4.2.1.1. Greenhouse Gases

The assessment of greenhouse gas emissions and climate change remains in its earliest stages of formulation. Applicable EPA rules do not require any controls and have yet to establish any emission limits related to GHG emissions or impacts. The lack of scientific models that predict climate change on regional or local level prohibits the quantification of potential future impacts of decisions made at the local level, particularly for small scale projects such as the Proposed Action. Drilling and development activities from the Proposed Action are anticipated to release a negligible amount of greenhouse gases into the local air-shed.

4.2.1.1.1. Mitigation

- Stationary internal combustion engines would comply with the following emission standards: 2 g/bhp-hr of NOx for engines less than 300 HP and 1 g/bhp-hr of NOx for engines over 300 HP.
- Either no or low bleed controllers would be installed on pneumatic pumps, actuators or other pneumatic devices.
- VOC venting controls or flaring would be utilized for oil or gas atmospheric storage tanks.
- VOC venting controls or flaring would be used for glycol dehydration and amine units.
- Where feasible, green completion would be used for well completion, re-completion, venting, or planned blowdown emissions. Alternatively, use controlled VOC emissions methods with 90% efficiency.

4.2.1.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

During construction process, the soils in the project area would be stripped of vegetation, moved around and compacted until the location is formed. Topsoil has been separated from other soils and will be used for interim and final reclamation only. The proposed action alternative has resulted in approximately 3.7 acres of disturbance. Upon well completion, the reserve pit would be reclaimed in accordance with Onshore Order #1 regulations and the surface owner's directions, which includes Ultra's surface operating plan and surface owner's agreements. Upon well abandonment, the well pad, road, and pipeline would be reclaimed in accordance with the surface owner's directions, and Ultra's site specific reclamation plan.

4.2.2. Wildlife: Migratory Birds (Including raptors)

Potential effects of the Proposed Action Alternative on avian species include 1) direct loss or degradation of potential nesting and foraging habitats, 2) indirect disturbance from human activity (including harassment, displacement, and noise), and 3) increased direct impacts (including poaching and collisions with vehicles). By following the mitigation measures outlined below these impacts would be minimized or completely negated.

Project activities are anticipated to disturb approximately 3.7 acres of migratory bird foraging and nesting habitat. Given the abundance of foraging habitat in the surrounding area, habitat losses are not expected to reduce raptor prey bases to levels where "take" would occur. Impacts to migratory birds within the proposed project area would also be dependent upon the time when project activities would occur. If these activities occur in the late fall, most of the species

would have left the area during winter migration. If construction activities were to occur during the spring or summer months it could cause birds to move into other adjacent habitats or into habitats where interspecific and intraspecific competition between species may increase. Surface and noise disturbance associated with project activities would be considered temporary and is anticipated to occur during typical working hours.

4.2.3. Wildlife: Threatened, Endangered, Proposed or Candidate

Colorado River Fish Species:

Water depletions from the Upper Colorado River Drainage System, along with a number of other factors, have resulted in such drastic reductions in the populations of the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker that the Service has listed these species as endangered and has implemented programs to prevent them from becoming extinct.

Water depletions reduce the ability of the river to create and maintain the primary constituent elements that define critical habitats. Food supply, predation, and competition are important elements of the biological environment. Food supply is a function of nutrient supply and productivity, which could be limited by reduction of high spring flows brought about by water depletions. Predation and competition from nonnative fish species have been identified as factors in the decline of the endangered fishes. Water depletions contribute to alterations in flow regimes that favor nonnative fishes.

The potential exists for water intake structures placed in the Upper Colorado River Drainage System (flowing rivers and streams) to result in mortality to eggs, larvae, young-of-the-year, and juvenile life stages. BLM and their applicants would minimize this potential by following applicant committed conservation measures (listed below and in Chapter 2). Key habitat components for foraging or cover may be removed or altered due to equipment, including decreased water quantity for aquatic species from dewatering during low flow periods.

The proposed action would result in a 15 acre-feet per year of water depletion based on removal of water from the Upper Colorado River Drainage System for construction and drilling operations. Therefore, the proposed action will have a "***may affect, likely to adversely affect***" determination for the endangered Colorado pikeminnow, humpback chub, bonytail, and razorback sucker. A programmatic Water Depletion Biological Assessment was prepared by the UWSFWS and the Bureau of Land Management, Vernal Field Office. These associated impacts are within the scope of this consultation. Therefore, the consultation for the water depletion impacts to the four Colorado River fish and their designated critical habitat has been previously completed.

Mitigation

- The best method to avoid entrainment is to pump from an off-channel location – one that does not connect to the river during high spring flows. An infiltration gallery constructed in a BLM and Service approved location is best.
- If the pump head is located in the river channel where larval fish are known to occur, the following measures apply:

    1. do not situate the pump in a low-flow or no-flow area as these habitats tend to concentrate larval fishes;

2. limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to August 31); and

3. limit the amount of pumping, to the greatest extent possible, during the pre-dawn hours as larval drift studies indicate that this is a period of greatest daily activity.

- Screen all pump intakes with 3/32 inch mesh material.
- Approach velocities for intake structures will follow the National Marine Fisheries Service's document "Fish Screening Criteria for Anadromous Salmonids". For projects with an in-stream intake that operate in stream reaches where larval fish may be present, the approach velocity will not exceed 0.33 feet per second (ft/s).
- Report any fish impinged on the intake screen to the Service (801.975.3330) and the Utah Division of Wildlife Resources:

Northeastern Region318 North Vernal Ave, Vernal, UT 84078

Phone: (435) 781-9453

4.3. No Action Alternative

4.3.1. Air Quality

Under the No Action Alternative, the Three Rivers Fed 4–34T-820 and Three Rivers 4–44T-820 would not be approved or drilled. It is assumed the proponent would drill the Three Rivers 4–43–820. Effects on ambient air quality would increase incremental from the present levels of existing oil and gas development in the region and other emission producing sources. Refer to Section 4.1.1 (pages 4-6 through 4-10) in the Greater Natural Buttes Final EIS for additional information on potential air quality impacts under the No Action.

4.3.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

Under the No Action Alternative, the Three Rivers Fed 4–34T-820 and Three Rivers 4–44T-820 would not be approved or drilled. However the disturbance of 3.7 acres has occurred to drill the Three Rivers 4–43–820. Soils and vegetation in the area would remain in their current state. Erosion rates would also remain at current levels.

4.3.3. Wildlife

Under the no action alternative, there would be no direct disturbance or indirect effects to threatened, endangered, proposed, candidate, or sensitive wildlife species from surface disturbing activities associated with the road realignment. Current land use trends in the area would continue, including increased industrial development, increased OHV traffic, increased recreational use for hunting, bird watching and sightseeing.

4.4. Reasonably Foreseeable Development and Cumulative Impacts Analysis

4.4.1. Cumulative Impacts

4.4.1.1. Air Quality

The cumulative impact area for air quality is the Uinta Basin. The potential impact of the Proposed Action to Uinta Basin ozone levels cannot be accurately modeled. In lieu of accurate modeling, the Greater Natural Buttes (GNB) air quality study, which is the most recent regional air model available for the Uinta Basin, and the GNB Final EIS section 5.3.1, is incorporated by reference and summarized below. The GNB Final EIS discloses that most of the cumulative emissions in the Uinta Basin are associated with oil and gas exploration and production activities. Consequently, past, present and reasonably foreseeable wells in the Uinta Basin are a part of the cumulative actions considered in this analysis. **Table 4.2, "2006 Uinta Basin Oil and Gas Operations Emissions Summary" (p. 19)** summarizes the 2006 Uinta Basin emissions as well as the incremental impact of this project's alternatives. The Proposed Action comprises a small percentage of the Uinta Basin emissions summary.

Table 4.2. 2006 Uinta Basin Oil and Gas Operations Emissions Summary

County	NO_x (tpy)	CO (tpy)	VOC (tpy)	SO_x (tpy)	PM (tpy)
Uintah	6,096	4,133	45,646	247	344
Carbon	995	814	2,747	22	40
Duchesne	3,053	2,448	19,019	96	173
Grand	337	207	2,360	16	22
Emery	273	199	453	9	14
Uinta Basin Total	10,754	7,800	70,226	391	592
Proposed Action	20.91	17.55	30.75	0.15	1.98
No Action	6.97	5.85	10.25	0.05	0.33

The GNB model predicted the following impacts to air quality and air quality related values for the GNB proposed action, which encompassed 3,675 new wells:

- Cumulative impacts from criteria pollutants to ambient air quality are well below the NAAQS at Class I airsheds and selected Class II areas;
- The incremental impacts to visibility would be virtually impossible to discern and would not contribute to regional haze at the Class I areas;
- The 2018 projected baseline emissions would result in impacts of 1.0 deciview for at least 201 days per year at the Class II areas;
- Discernible impacts at Flaming Gorge National Recreation Area and Dinosaur National Monument are anticipated under the GNB Final EIS proposed action;
- The GNB Final EIS proposed action would contribute less than 1 percent to the acid deposition in Class I areas, and 4.3 percent at the Flaming Gorge Class II area;
- Project-related acid deposition impacts at sensitive lakes were below the USFS screening threshold; and,

- Ozone levels are below the current ozone standard of 75 ppb for the fourth highest annual level in the Uinta Basin for the 2018 projected baseline, and the proposed action would be approximately 3.2 percent of the cumulative ozone impact within the Uinta Basin.

Based on the GNB model results, it is anticipated that the impact to ambient air quality and air quality related values associated with the Proposed Action would be indistinguishable from, and dwarfed by, the margin of uncertainty associated with the model and Uinta Basin emission inventory. The No Action alternative would not result in an accumulation of impacts.

Inconsistent results based on scientific models used to predict global climate change prohibit the BLM from quantifying cumulative impacts. Drilling and development activities from the Proposed Action are anticipated to release a negligible amount of greenhouse gases, into the local airshed, resulting in a negligible cumulative impact. The No Action Alternative would not result in an accumulation of impacts.

4.4.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

The cumulative impact area is the Greater Uinta Basin as defined in the Greater Uinta Basin Cumulative Impacts Technical Support Document (2012), a 5,853,000 acre area. Oil and gas development are major resource development activities within the planning area. Approximately 10,689 wells are active within the cumulative impact area. It is estimated that approximately 28,417 new wells would be drilled. Past, present, and reasonably foreseeable impacts would result in 67,436 acres of disturbance to soils and vegetation. Cumulative impacts to soils and vegetation typical of oil and gas field development include: removal of native vegetation and disturbance to soils which are generally very thin, slow to develop, and difficult to reclaim due to arid climate, low average precipitation per year, erosional forces, microbial breakdown, leaching of soils, and low organic content. The proposed action would result in 3.7 acres of additional disturbance to soils and vegetation. The no action would have the same impacts as the proposed impacts.

4.4.3. Wildlife:

4.4.3.1. Wildlife: Migratory Birds (Including raptors)

The cumulative impact analysis area for migratory birds is defined as the Pelican Lake-Green River Hydrologic Unit Boundary consisting of approximately 83,832 acres. This hydrologic unit boundary was chosen for cumulative impact analysis as this best represents a soil and vegetation habitat type avian species found within the project area would utilize in whole. Future actions of the Proposed Action could increase human presence in the area continuing to fragment and manipulate the surrounding habitats by increasing the presence of non-native invasive plant species. Further introduction of non-native invasive plant species could have significant adverse impacts on migratory birds that are dependent upon prevalent species for their survival. In general such an environmental shift would probably have negative impacts on wildlife species and would favor non-native and readily adaptive species.

Impacts to migratory birds in the cumulative impact analysis area would be dependent upon the season of project activities. Any activities completed in the late fall would less likely have a direct impact to avian species because many of the species would have left for winter grounds. In addition to displacement caused by project activities the Proposed Action Alternative would also result in the temporary removal of up to approximately 3.7 acres of potential nesting and foraging

habitat for migratory birds. However, successful reclamation efforts would return disturbed habitats to pre-disturbance levels and loss of vegetation would be a temporary impact to migratory bird habitat. The No Action Alternative would have the same results as the proposed action.

4.4.3.2. Wildlife: Threatened, Endangered, Proposed or Candidate

Cumulative effects include the effects of the future state, tribal, local, or private actions that are reasonably certain to occur within the upper Colorado River Basin. Declines in the abundance or range of many special status species have been attributed to various human activities on federal, state, and private lands, such as human population expansion and associated infrastructure development; construction and operation of dams along major waterways; water retention, diversion, or dewatering of springs, wetlands, or streams; recreation, including off-road vehicle activity; expansion of agricultural or grazing activities, including alteration or clearing of native habitats for domestic animals or crops; and introductions of nonnative plant, wildlife, or fish, or other aquatic species, which can alter native habitats or out compete or prey upon native species. Many of these activities are expected to continue on state and private lands within the range of the various federally protected wildlife, fish, and plant species, and could contribute to cumulative effects to the species within the project area. Species with small population sizes, endemic locations, or slow reproductive rates, or species that primarily occur on non-federal lands where landholders may not participate in recovery efforts, would be highly susceptible to cumulative effects.

Reasonably foreseeable future activities that may affect river-related resources in the area include oil and gas exploration and development, irrigation, urban development, recreational activities, and activities associated with the Upper Colorado River Endangered Fish Recovery Program. Implementation of all or any of these projects has affected and continues to affect the environment including, but not limited to, water quality, water rights, socioeconomic, and wildlife resources.

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Chapter 5. Tribes, Individuals, Organizations, or Agencies Consulted:

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Table 5.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Three Rivers Holdings, LLC	BLM requires that the Operator engage the Surface Owner in negotiations for the purpose of obtaining a surface owner agreement or waiver for access.	Surface use agreement or certification received on 8/25/2014.
USFWS	Information on Consultation, under Section 7 of the Endangered Species Act (16 USC 1531).	Water depletion will occur for the proposed project; however, the proposed project wells have been analyzed under the USFWS's *Conclusion of Reinitiation of Section 7 Consultation for Water Depletion in the Upper Colorado River Basin on Bureau of Land Management land administered by the Vernal Field Office Biological Assessment, 2011* (FWS/R6 ES/UT 06-F-0215-R001).
State Historic Preservation Office (SHPO)	Historic Preservation Act.	BLM recommended a No Effect determination based on Class III surveys and asked for concurrence on all of the wells listed in this EA. Concurrence was received, documentation of this can be found in the individual well/APD files.

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Chapter 6. List of Preparers

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Table 6.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
David Gordon	Natural Resource Specialist/ Environmental Scientist	Chapters 1 & 2 Chapters 3 & 4: Soils and vegetation
Brandon McDonald	Wildlife Biologist	Chapters 3 & 4: Wildlife
Jimmie McKenzie	Archeologist	Archeology Report

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Chapter 7. References Cited

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BLM. 2008. Vernal Field Office Resource Management Plan, U.S. Department of the Interior, Bureau of Land Management, Vernal District Office.

BLM. 2012c. Final Environmental Impact Statement for the Greater Natural Buttes

Uintah County. 2011. Uintah County General Plan. Amended Number 02-27. i – xiv + 302 pp.